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INFORMATION SYSTEMS STUDY 1988

Published By:

The Research Department
Food Marketing Institute
1750 K Street N.W.
Washington, DC 20006

Price:

$15.00 FMI Member
$20.00 Non-member
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Food Marketing Institute

The Food Marketing Institute (FMI) is a nonprofit association conducting programs in research, education and public affairs on behalf of its 1,500 members—food retailers and wholesalers and their customers in the United States and overseas. FMI's domestic member companies operate more than 17,000 retail food stores with a combined annual sales volume of $180 billion—half of all grocery sales in the United States. More than three-fourths of the FMI's membership is composed of independent supermarket operators or small regional firms. Its international membership includes more than 190 members from over 50 nations.

TABLE OF CONTENTS

Executive Summary	v
List of Tables	vii
Foreword	viii
Personnel	1
Budget Information	9
Time Allocation	20
Disaster Recovery Plans	22
Experience With Selected Technologies	24
Voice and Data Communications	29
Methodology	37
Sample Questionnaire	39

EXECUTIVE SUMMARY

FMI's *Information Systems Study* examines various facets of the information systems department within food retailers and wholesalers with annual sales of $50 million or greater. The information systems department is critical in a food distribution industry whose various parts are linked together by computer technology.

The average-sized department employed about 92 people with over 42 percent in operations functions and almost 37 percent in systems. Another 16.4 percent worked in areas categorized as "additional support," including such things as scanning and store systems support.

The budget for the IS department was typically 0.43 percent of the company's annual sales. Almost 37 percent of the average budget was allocated to wages and salaries, while another 32 percent went for equipment rental, maintenance, and depreciation. Almost 85 percent of the budget went for headquarters and distribution center systems with the remaining 15 percent dedicated to store systems. An average department expected an 8.03 percent increase in next year's budget.

Personal computers were the budgetary responsibility of 64 percent of responding companies. Word processing, voice communication, and retail services were overseen by less than half the departments studied. Just over 15 percent were responsible for the mailroom.

Maintenance and problem solving took up almost 39 percent of an average department's time. Another 38 percent was devoted to new applications for headquarters and distribution systems with new applications for store systems using 15 percent.

The level of various technologies was examined and it was found that over 40 percent used advanced personal computers with a mainframe connection. Other technologies in the advanced use stage by several firms include distributed processing in-store – 29.0 percent and the Uniform Communication Standard (UCS) – 19.4 percent. Some important new technologies in the evaluation phase include computer-assisted engineering systems – 37.3 percent, electronic shelf tags – 35.7 percent, and UCS/DSD – 47.7 percent. The use of the UCS for direct store delivery is an example of technology tying the various parts of the industry closer together. Almost 88 percent of the responding companies said they had some retail automation.

This year's study also examined the communications function in IS departments. Over half the departments reported to a single manager who worked in the IS department in over 90 percent of the responding companies. Key systems were used in almost 51 percent of companies surveyed while only 31 percent used T1 transmission facilities.

LIST OF TABLES

Table 1 - Percentage of IS Employees in Each Job Category. 4

Table 2 - Average Number of Information Systems Employees by Size and Type of Company 9

Table 3 - Percentage of IS Expenses in Each of the Following Areas 12

Table 4 - Budget Expenses 15

Table 5 - Percentage of Total Expense Budget Allocated To: 18

Table 6 - Responsibilities of IS Department 19

Table 7 - Percentage of Time Allocated to IS Activities 21

Table 8 - Formal Disaster Recovery Plans 23

Table 9 - Experience With Selected Technologies 26

Table 10 - Percentage of Companies Using Retail Automation 27

Table 11 - Percentage of Stores Using Retail Automation 28

Table 12 - Percentage of the Communications Staff Reporting to a Single Manager 30

Table 13 - Percentage of Communications Managers in the Information Systems Department 31

Table 14 - Annual Telecommunications Costs 32

Table 15 - Telephone Systems 33

Table 16 - T1 Transmission Facilities 35

Table 17 - T1 Transmission Connections 36

Table 18 - Number of Respondents by Size and Type of Company 37

FOREWORD

Food distribution is a consumer-driven industry, continuously striving to meet the demands for nutrition, convenience, service, and economy. In 1987, the industry existed in a highly competitive environment with an overabundance of stores in many parts of the country. Almost 10 percent of supermarkets were remodeled in 1987 in an attempt to meet consumer desires and the competition. Food producers and manufacturers provided a wealth of new items designed to meet various consumer preferences. Recent FMI research found that in 1987 buyers in a typical company previewed over 2200 new items and that a typical supermarket carried over 24,500 items. The retail side of the industry was in a double bind last year — consumers wanted more products and better service, yet many companies faced a severe labor shortage as the number of traditional part-time workers continued to dwindle.

Information systems technology is tying the various parts of the industry together — the manufacturer, the wholesaler, and the retail store. Particularly important is the labor savings at the retail level. Programs allowing corporate computers to communicate with front-end systems are one example. ,They allow pricing to be maintained at the headquarters or wholesaler level, taking this chore away from the store. Electronic order entry systems can deliver an order to the store with the pallets stacked in the same way the store is laid out, again saving labor.

One of the most important recent developments involves headquarters level computer-to-computer data interchange via the protocols of the Uniform Communication Standard. A project is currently underway to extend UCS to direct store delivery (DSD) transactions. DSD refers to goods that are delivered directly from the manufacturer to the store, instead of via a company-owned warehouse or a wholesaler. Items with short shelf lives, such as dairy products or baked goods, are typically delivered in this manner. Because there are over 500 million such deliveries each year, a joint task force was established to simplify this complex system. Bringing DSD under the Uniform Communication Standard (UCS), will provide a uniform system for direct data transfer throughout the industry and will facilitate computer-to-computer exchanges of transactional messages, such as purchase orders and invoices, generating substantial savings.

One major wholesaler has developed a combination warehouse/inventory and buying system which allows instantaneous tracking of every single pallet in their warehouse. This allows buyers to maximize inventory levels and make decisions on investment buying. It also reduces "out-of-stocks," instances where an order cannot be filled because the item is not in the warehouse. Warehouse storage capacity is maximized as the system matches slot size with incoming pallet size. In addition, it provides the transportation function with sufficient advance warnings on product movement to route inbound freight in the most advantageous method.

A standardized method for implementing the Direct Product Profit (DPP) method of cost accounting has been available for quite some time. This Unified DPP method was developed by retailers, wholesalers, manufacturers, and trade associations, and coordinated by the Food Marketing Institute. Recent updates include models for produce and fresh meat products with plans for further models for the bakery and deli. FMI has also begun developing studies of various DPP applications.

Electronic marketing, the use of customer purchase data captured at point of sale, is becoming a potent force in the industry. Uses include targeted marketing programs designed to stimulate customer loyalty, product trial, and new product introductions.

As technology permeates the industry and brings its many functions closer together, the role of the information systems department in retail and wholesale grocery companies has become a key force in company operations. Thus, the importance of the data contained in this report cannot be overemphasised.

PERSONNEL

The ratios of IS department employees by various functions have been changing in the past three years. Figure 1 clearly illustrates these trends — increases in the percentage of people involved in additional support and systems coupled with a decrease in operations staff and management.

The percentage of management employees in the IS department has remained between 4 and 5 percent for the past four years. As shown in figure 1 the proportion of systems employees climbed slightly each year since 1986. Still, these numbers represent a significant drop from the 44.9 percent in 1985. Since the study began in 1979, the proportion of people working in the operations area rose to 1986's high of 51.7 percent then declined slightly the following year to 47.9 percent and to 42.5 percent in 1988.

The "additional support" area, including store and scanning support, telecommunications, etc., accounted for 16.4 percent of IS employees in 1988, up from 10.7 percent in 1987. These data illustrate the movement of IS functions out from the headquarters level into the retail stores and warehouses. For example, Table 10 of this report shows that 87.8 percent of companies surveyed have retail automation in their stores.

The average number of employees involved in the IS function in food distribution companies continues to rise steadily as shown in Figure 2. This year's average of 92.4 represents a 62 percent increase from 1985's 57.1 people.

FIGURE 1

PERCENTAGE OF EMPLOYEES IN EACH JOB CATEGORY

1986 -- 1988

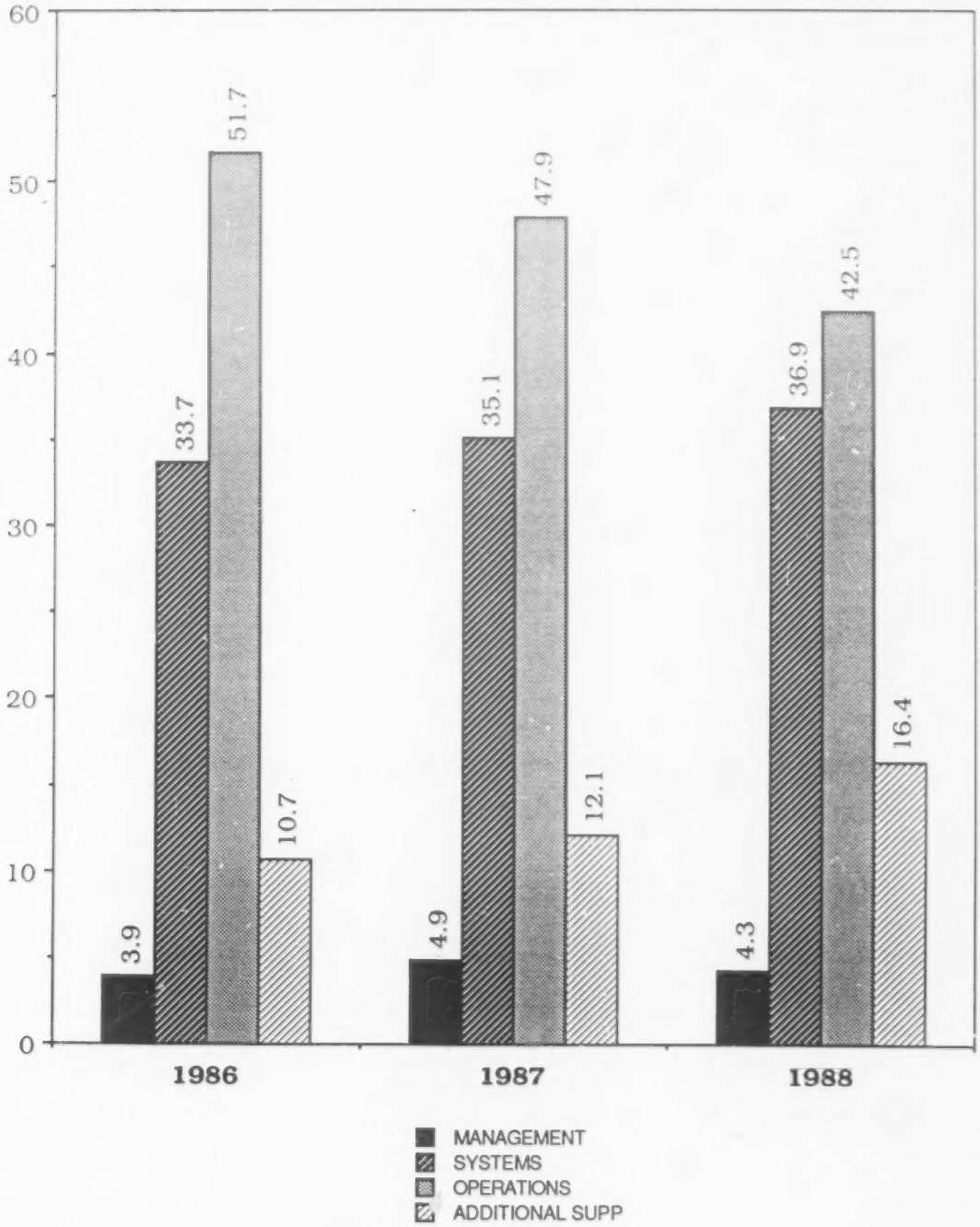
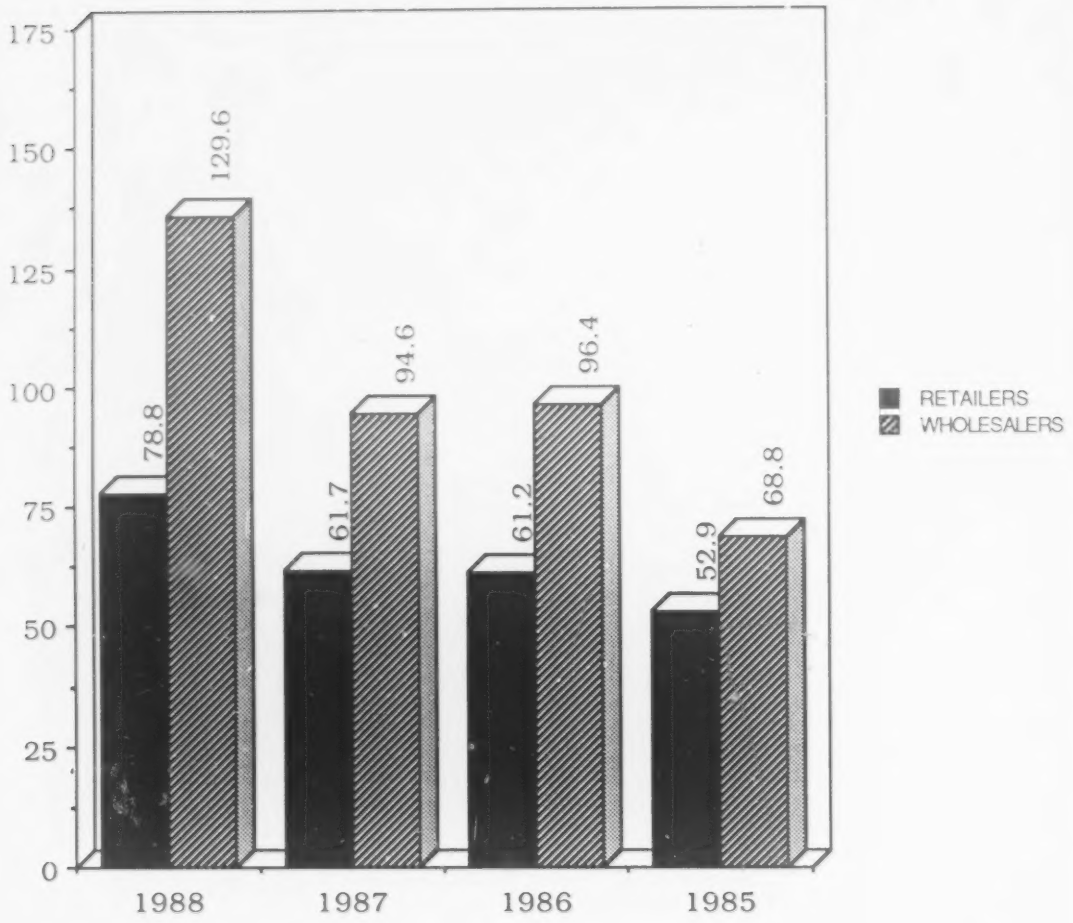


FIGURE 2

Average Number of Information Systems Employees (excluding Data Entry)



Q1. PLEASE PROVIDE THE NUMBER OF EMPLOYEES IN YOUR COMPANY DIRECTLY INVOLVED IN THE INFORMATION SYSTEMS FUNCTION.

TABLE 1-1

PERCENTAGE OF IS EMPLOYEES IN EACH JOB CATEGORY -- ALL COMPANIES

		TOTAL ANNUAL COMPANY SALES (IN MILLIONS OF DOLLARS)				
	AVERAGE	$ 50-249	$ 250-499	$ 500-999	$ 1000-2999	$ 3 BILLION+
TOTAL	71	13	11	18	17	12
IS MANAGEMENT:						
SENIOR MANAGEMENT	2.2	9.1	6.2	2.7	2.6	2.1
GENERAL ADMINISTRATION/ SECRETARIAL	2.1	2.5	3.4	2.5	2.7	2.0
TOTAL MANAGEMENT	4.3	11.6	9.6	5.2	5.3	4.1
SYSTEMS:						
ADMINISTRATION & MANAGEMENT	3.1	3.7	3.1	3.3	2.4	3.2
DATA BASE/DATA ADMINISTRATION	1.9	1.8	1.0	1.1	1.8	2.0
PROJECT MANAGEMENT	3.1	1.9	3.5	4.0	3.4	3.0
DEVELOPMENT (ANALYST/ PROGRAMMERS)	27.4	27.6	23.8	24.0	28.2	27.4
OTHER	1.3	.3	-	.4	.8	1.4
TOTAL SYSTEMS	36.9	35.4	31.4	32.8	36.6	37.0
OPERATIONS:						
ADMINISTRATION/MANAGEMENT/ SUPERVISION	6.0	2.1	7.4	6.5	5.5	6.0
OPERATIONS	22.0	25.8	15.5	17.2	16.2	23.0
DATA ENTRY EMPLOYEES	9.5	17.5	13.9	16.0	11.9	8.9
OTHER	5.1	-	4.9	3.0	4.0	5.3
TOTAL OPERATIONS	42.5	45.3	41.7	42.8	37.6	43.2

TABLE 1-1

PERCENTAGE OF IS EMPLOYEES IN EACH JOB CATEGORY -- ALL COMPANIES

		TOTAL ANNUAL COMPANY SALES (IN MILLIONS OF DOLLARS)				
	AVERAGE	$ 50-249	$ 250-499	$ 500-999	$ 1000-2999	$ 3 BILLION+
ADDITIONAL SUPPORT AREAS:						
STORE SYSTEMS SUPPORT	1.5	2.4	3.7	3.2	3.3	1.2
SCANNING SUPPORT	1.7	1.8	3.6	1.2	1.4	1.8
INFORMATION CENTER	1.2	-	2.2	1.4	1.5	1.1
HELP DESK	2.8	-	.5	1.6	2.0	3.0
DATA SECURITY	.3	-	-	.2	.3	.4
TELECOMMUNICATIONS VOICE	.8	.1	.3	1.0	1.1	.8
TELECOMMUNICATIONS DATA	1.3	.1	-	1.0	1.4	1.3
TECHICAL SUPPORT/SYSTEMS PROGRAMMERS	4.1	2.5	4.1	4.6	3.5	4.2
RETAIL AUTOMATION/SUPPORT	.6	.7	-	2.0	.7	.5
QUALITY ASSURANCE	.6	-	-	.1	.6	.7
OTHER	1.2	-	2.9	2.9	4.7	.7
TOTAL ADDITIONAL SUPPORT	16.4	7.7	17.3	19.2	20.5	15.7

NOTE: DATA WEIGHTED BY COMPANY SALES

SOURCE: INFORMATION SYSTEMS STUDY, FOOD MARKETING INSTITUTE, 1988

TABLE 1-2
PERCENTAGE OF IS EMPLOYEES IN EACH JOB CATEGORY -- RETAILERS

		TOTAL ANNUAL COMPANY SALES (IN MILLIONS OF DOLLARS)				
	AVERAGE	$ 50-249	$ 250-499	$ 500-999	$ 1000-2999	$ 3 BILLION+
TOTAL	52	11	10	13	10	8
IS MANAGEMENT:						
SENIOR MANAGEMENT	2.1	15.1	6.3	3.1	2.1	2.1
GENERAL ADMINISTRATION/ SECRETARIAL	2.4	1.3	3.3	2.1	2.6	2.4
TOTAL MANAGEMENT	4.5	16.3	9.6	5.2	4.7	4.5
SYSTEMS:						
ADMINISTRATION & MANAGEMENT	3.2	5.5	2.9	3.9	1.9	3.4
DATA BASE/DATA ADMINISTRATION	2.3	3.5	1.1	.7	2.3	2.3
PROJECT MANAGEMENT	3.2	-	3.7	4.8	3.5	3.2
DEVELOPMENT (ANALYST/ PROGRAMMERS)	29.8	18.5	24.8	21.3	27.5	30.3
OTHER	1.8	.6	-	.7	.8	2.0
TOTAL SYSTEMS	40.3	28.3	32.6	31.5	36.0	41.1
ADMINISTRATION/MANAGEMENT/ SUPERVISION	4.7	2.3	7.6	6.8	5.1	4.6
OPERATIONS	20.6	20.7	15.9	16.6	17.8	21.1
DATA ENTRY EMPLOYEES	7.9	21.2	12.7	15.8	10.7	7.3
OTHER	4.3	-	5.3	3.4	4.4	4.3
TOTAL OPERATIONS	37.5	44.0	41.5	42.6	38.0	37.3
ADDITIONAL SUPPORT AREAS:						
STORE SYSTEMS SUPPORT	1.6	4.8	3.9	2.6	3.1	1.4

Continued

TABLE 1-2
PERCENTAGE OF IS EMPLOYEES IN EACH JOB CATEGORY -- RETAILERS

		TOTAL ANNUAL COMPANY SALES (IN MILLIONS OF DOLLARS)				
	AVERAGE	$ 50-249	$ 250-499	$ 500-999	$ 1000-2999	$ 3 BILLION+
SCANNING SUPPORT	1.4	3.6	3.9	1.9	1.4	1.3
INFORMATION CENTER	1.4	-	2.3	2.0	1.3	1.4
HELP DESK	3.9	-	.6	1.8	2.5	4.2
DATA SECURITY	.4	-	-	-	.2	.4
TELECOMMUNICATIONS VOICE	1.0	.2	.3	.7	1.0	1.0
TELECOMMUNICATIONS DATA	1.5	.1	-	.9	1.7	1.5
TECHICAL SUPPORT/SYSTEMS PROGRAMMERS	4.4	1.2	4.4	3.8	3.2	4.5
RETAIL AUTOMATION/SUPPORT	.4	1.5	-	2.3	-	.4
QUALITY ASSURANCE	.5	-	-	-	.9	.5
OTHER	1.1	-	1.0	5.0	5.8	.4
TOTAL ADDITIONAL SUPPORT	17.6	11.5	16.4	20.8	21.3	17.1

NOTE: DATA WEIGHTED BY COMPANY SALES

SOURCE: INFORMATION SYSTEMS STUDY, FOOD MARKETING INSTITUTE, 1988

TABLE 1-3
PERCENTAGE OF IS EMPLOYEES IN EACH JOB CATEGORY -- WHOLESALERS

	AVERAGE
TOTAL	19
IS MANAGEMENT:	
SENIOR MANAGEMENT	2.3
GENERAL ADMINISTRATION/ SECRETARIAL	1.5
TOTAL MANAGEMENT	3.8
SYSTEMS:	
ADMINISTRATION & MANAGEMENT	2.9
DATA BASE/DATA ADMINISTRATION	1.2
PROJECT MANAGEMENT	2.8
DEVELOPMENT (ANALYST/ PROGRAMMERS)	22.5
OTHER	.2
TOTAL SYSTEMS	29.5
OPERATIONS:	
ADMINISTRATION/MANAGEMENT/ SUPERVISION	8.6
OPERATIONS	24.8
DATA ENTRY EMPLOYEES	12.9
OTHER	6.7
TOTAL OPERATIONS	53.0

	AVERAGE
ADDITIONAL SUPPORT AREAS:	
STORE SYSTEMS SUPPORT	1.2
SCANNING SUPPORT	2.6
INFORMATION CENTER	.8
HELP DESK	.6
DATA SECURITY	.2
TELECOMMUNICATIONS VOICE	.5
TELECOMMUNICATIONS DATA	1.0
TECHICAL SUPPORT/SYSTEMS PROGRAMMERS	3.7
RETAIL AUTOMATION/SUPPORT	.9
QUALITY ASSURANCE	.8
OTHER	1.4
TOTAL ADDITIONAL SUPPORT	13.7

NOTE: DATA WEIGHTED BY COMPANY SALES

SOURCE: INFORMATION SYSTEMS STUDY, FOOD MARKETING INSTITUTE, 1988

Q1. PLEASE PROVIDE THE NUMBER OF EMPLOYEES IN YOUR COMPANY DIRECTLY INVOLVED IN THE INFORMATION SYSTEMS FUNCTION.

TABLE 2-1
AVERAGE NUMBER OF INFORMATION SYSTEMS EMPLOYEES BY SIZE AND TYPE OF COMPANY

		TOTAL ANNUAL COMPANY SALES (IN MILLIONS OF DOLLARS)				
	AVERAGE	$ 50-249	$ 250-499	$ 500-999	$ 1000-2999	$ 3 BILLION+
TOTAL	92.4	10.0	19.3	44.3	119.6	282.2
RETAILERS	78.8	6.8	19.2	38.2	116.3	271.1
WHOLESALERS	129.6	27.5	20.0	60.2	124.1	304.5

NOTE: UNWEIGHTED DATA

SOURCE: INFORMATION SYSTEMS STUDY, FOOD MARKETING INSTITUTE, 1988

BUDGETS

As shown in Table 4, the average amount allocated to all IS department expenses in the companies surveyed was $7,843,194. This represented 0.43 percent of net annual company sales, a figure very similar to those reported during the last five years (Figure 3). The average company spent $3,293,506 in 1987 on employee wages, salaries, and fringe benefits, which is always the largest expense. The proportion of the total budget devoted to wages and salaries has declined over the past few years — 42.2 percent in 1985, 40.2 percent in 1986, 40.1 percent in 1987, and 36.1 percent in 1988 (Figure 4). This reflects the increasing diversity of information systems functions. For example, the category of software, rental, amortization, and purchase has seen steady increases every year since 1983.

The proportion of the IS department budget devoted to store systems — approximately 15 percent versus headquarters systems — 85 percent has remained the same during the past three years.

As shown in Table 6, over 60 percent of IS departments surveyed have budgetary responsibility for personal computers. This number is very similar to last year but represents a decline from the figures reported in 1985 and 1986. About 35 percent are responsible for retail services, again similar to 1987 but quite a bit less than the 51.5 percent reported in 1986. This indicates that functions which were formerly the domain of the IS department are becoming commonplace throughout the industry.

FIGURE 3

PERCENTAGE OF NET COMPANY SALES
BUDGETED TO THE IS DEPARTMENT
1984 -- 1988

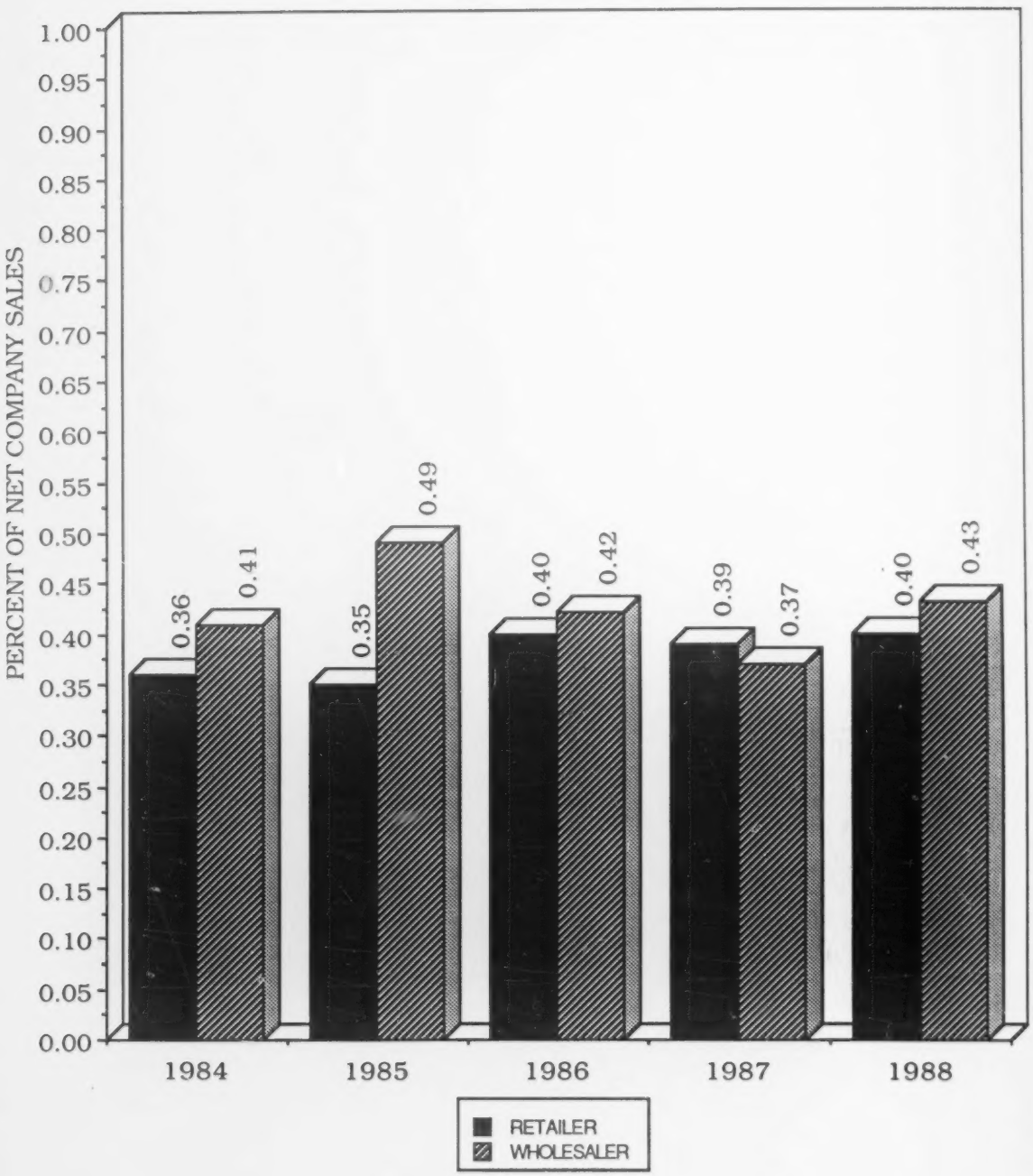
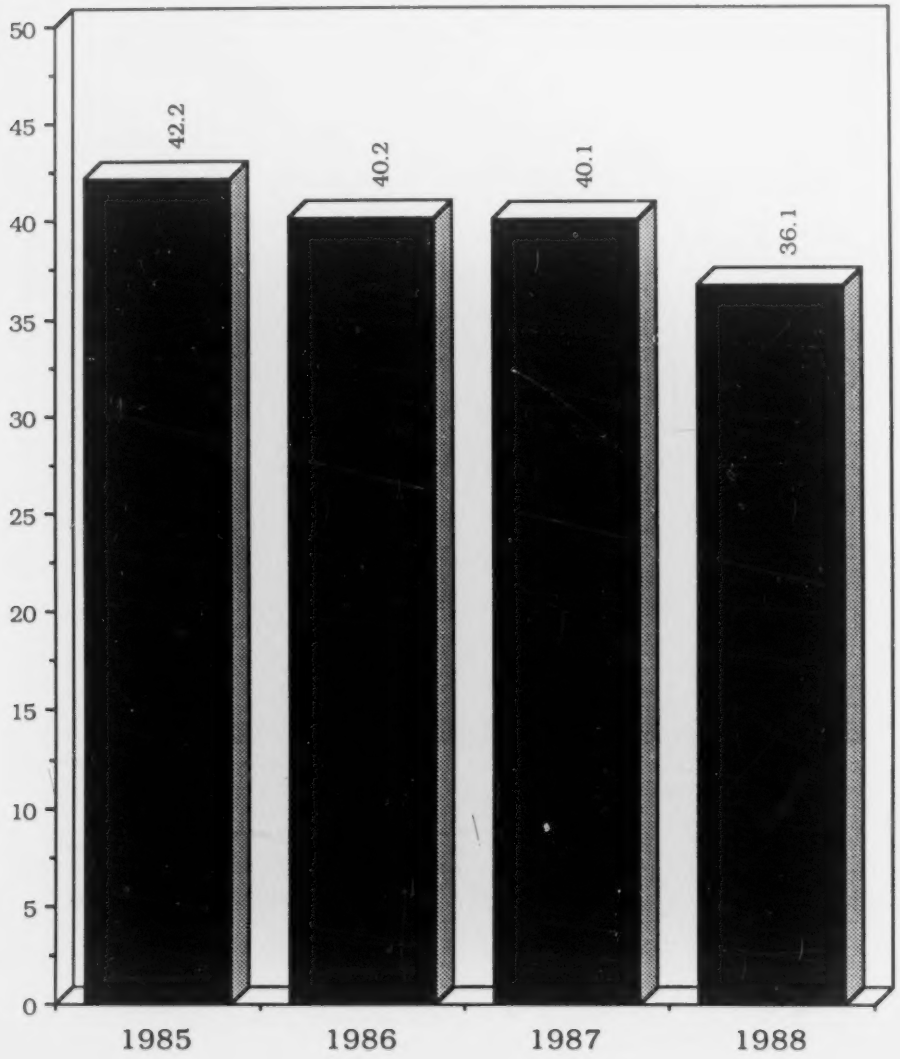


FIGURE 4

PERCENTAGE OF IS EXPENSES DEVOTED TO WAGES AND SALARIES



Q2. FOR THIS FISCAL YEAR, PLEASE PROVIDE THE PERCENT OF YOUR TOTAL COMPANY INFORMATION SYSTEMS EXPENSE BUDGET THAT IS YOUR BUDGET RESPONSIBILITY ALLOCATED TO EACH OF THE FOLLOWING AREAS. PLEASE EXCLUDE ALL EQUIPMENT AND MAINTENANCE COSTS FOR IN-STORE SYSTEMS.

TABLE 3-1
PERCENTAGE OF IS EXPENSES IN EACH OF THE FOLLOWING AREAS ** -- ALL COMPANIES

		TOTAL ANNUAL COMPANY SALES (IN MILLIONS OF DOLLARS)				
	AVERAGE	$ 50-249	$ 250-499	$ 500-999	$ 1000-2999	$ 3 BILLION+
TOTAL	50	6	8	11	16	9
WAGES AND SALARIES	36.7	23.1	37.1	35.6	39.6	35.4
EQUIPMENT (RENTAL, MAINTENANCE AND DEPRECIATION)	28.3	35.7	21.0	26.9	27.8	29.1
EMPLOYEE FRINGE BENEFITS	8.6	22.3	8.6	8.2	10.4	7.6
SUPPLIES	6.5	6.8	12.8	8.2	6.9	5.6
SOFTWARE RENTAL, AMORTIZATION, AND PURCHASE	6.3	2.9	9.6	8.9	6.9	5.3
OVERHEAD	4.0	0	4.2	2.6	1.3	5.7
DATA COMMUNICATIONS	2.7	.1	.7	1.6	.7	4.1
OUTSIDE PROFESSIONAL SERVICES	1.9	1.5	1.4	1.0	1.4	2.4
VOICE AND DATA COMMUNICATIONS	1.3	0	.2	3.3	1.5	.9
EDUCATION, TRAINING	1.0	3.7	1.6	1.0	1.0	.9
SCANNING	.3	0	.1	.3	0	.5
DISASTER RECOVERY	.3	.1	.6	.3	.2	.3
SERVICE BUREAUS	.2	0	1.7	.8	.2	0
HELP DESK	.1	0	0	0	0	.2
PERSONAL COMPUTERS RETAIL SERVICE	.1	0	0	0	0	.2
OTHER	1.8	3.8	.2	1.5	2.1	1.8

** QUESTION WAS REWORDED AND RESULTS MAY NOT BE COMPARABLE WITH PREVIOUS YEARS

NOTE: DATA WEIGHTED BY IS EXPENSE BUDGET

SOURCE: INFORMATION SYSTEMS STUDY, FOOD MARKETING INSTITUTE, 1988

TABLE 3-2
PERCENTAGE OF IS EXPENSES IN EACH OF THE FOLLOWING AREAS ** -- RETAILERS

		TOTAL ANNUAL COMPANY SALES (IN MILLIONS OF DOLLARS)				
	AVERAGE	$ 50-249	$ 250-499	$ 500-999	$ 1000-2999	$ 3 BILLION+
TOTAL	34	5	7	7	10	5
WAGES AND SALARIES	36.1	20.8	37.0	40.4	40.6	33.4
EQUIPMENT (RENTAL, MAINTENANCE AND DEPRECIATION)	27.4	36.3	21.3	26.0	27.3	28.1
EMPLOYEE FRINGE BENEFITS	9.2	25.6	8.6	7.7	10.9	8.3
SOFTWARE RENTAL, AMORTIZATION, AND PURCHASE	6.8	3.5	10.2	6.8	7.6	6.1
SUPPLIES	5.8	5.8	13.2	9.5	6.5	4.3
OVERHEAD	3.8	0	4.4	2.3	1.0	5.5
DATA COMMUNICATIONS	3.2	.2	.7	.9	.6	5.1
OUTSIDE PROFESSIONAL SERVICES	2.4	1.8	1.5	1.6	1.8	2.9
VOICE AND DATA COMMUNICATIONS	1.0	0	.2	.3	.9	1.2
EDUCATION, TRAINING	.9	4.6	1.7	.4	.6	.9
SCANNING	.6	0	.1	.7	0	.9
DISASTER RECOVERY	.3	.2	.7	.3	.1	.3
HELP DESK	.2	0	0	.1	0	.3
PERSONAL COMPUTERS RETAIL SERVICE	.2	0	0	0	0	.3
SERVICE BUREAUS	.1	0	0	.6	0	0
OTHER	2.0	1.2	.2	2.4	2.0	2.2

** QUESTION WAS REWORDED AND RESULTS MAY NOT BE COMPARABLE WITH PREVIOUS YEARS

NOTE: DATA WEIGHTED BY IS EXPENSE BUDGET

SOURCE: INFORMATION SYSTEMS STUDY, FOOD MARKETING INSTITUTE, 1988

TABLE 3-3

PERCENTAGE OF IS EXPENSES IN EACH OF THE FOLLOWING AREAS ** -- WHOLESALERS

	AVERAGE
TOTAL	16
WAGES AND SALARIES	37.4
EQUIPMENT (RENTAL, MAINTENANCE AND DEPRECIATION)	29.5
EMPLOYEE FRINGE BENEFITS	7.8
SUPPLIES	7.3
SOFTWARE RENTAL, AMORTIZATION, AND PURCHASE	5.5
OVERHEAD	4.3
DATA COMMUNICATIONS	2.0
VOICE AND DATA COMMUNICATIONS	1.7
OUTSIDE PROFESSIONAL SERVICES	1.3
EDUCATION, TRAINING	1.1
SERVICE BUREAUS	.4
DISASTER RECOVERY	.3
HELP DESK	0
PERSONAL COMPUTERS RETAIL SERVICE	0
SCANNING	0
OTHER	1.5

** QUESTION WAS REWORDED AND RESULTS MAY NOT BE COMPARABLE WITH PREVIOUS YEARS

NOTE: DATA WEIGHTED BY IS EXPENSE BUDGET

SOURCE: INFORMATION SYSTEMS STUDY, FOOD MARKETING INSTITUTE, 1988

Q3. PLEASE PROVIDE THE FOLLOWING IS BUDGET EXPENSE NUMBERS FOR THIS FISCAL YEAR. ONLY ACCOUNT FOR THOSE ITEMS THAT ARE YOUR BUDGET RESPONSIBILITY.

A. DOLLARS OF *TOTAL COMPANY EXPENSE BUDGET* ALLOCATED FOR IS WAGES AND SALARIES: INCLUDING FRINGE BENEFITS AND EXCLUDING FRINGE BENEFITS.

B. DOLLARS OF *TOTAL COMPANY EXPENSE BUDGET* FOR ALL IS ITEMS COVERED IN QUESTION 2.

C. PERCENTAGE OF *NET COMPANY SALES* BUDGETED TO THE IS DEPARTMENT FOR THIS FISCAL YEAR.

D. ACTUAL IS DOLLARS SPENT FOR THE MOST RECENTLY COMPLETED FISCAL YEAR AS A PERCENTAGE OF NET COMPANY SALES.

E. EXPECTED PERCENTAGE INCREASE IN YOUR BUDGET FOR IS ITEMS IN THE UPCOMING FISCAL YEAR.

TABLE 4-1
BUDGET EXPENSES ***
-- ALL COMPANIES

		TOTAL ANNUAL COMPANY SALES (IN MILLIONS OF DOLLARS)				
	AVERAGE	$ 50-249	$ 250-499	$ 500-999	$ 1000-2999	$ 3 BILLION+
TOTAL	53	6	8	13	16	10
BUDGET DOLLARS ALLOCATED TO IS DEPARTMENT SALARIES AND WAGES, INCLUDING FRINGE BENEFITS*	3293506	230992	715181	1446340	3804934	8776704
TOTAL	52	6	7	13	16	10
BUDGET DOLLARS ALLOCATED TO IS DEPARTMENT SALARIES AND WAGES, EXCLUDING FRINGE BENEFITS*	2822179	121807	624812	1111889	3038765	7857400
TOTAL	54	6	8	13	17	10
BUDGET DOLLARS ALLOCATED TO ALL IS DEPARTMENT EXPENSES*	7843194	488233	1451729	3360100	7071948	24508485
TOTAL	49	5	8	11	16	9
PERCENTAGE OF NET COMPANY SALES BUDGETED TO IS DEPARTMENT (THIS FISCAL YEAR)**	.43	.30	.53	.47	.40	.43
TOTAL	48	5	8	11	14	10
ACTUAL IS EXPENSE AS A PERCENTAGE OF NET COMPANY SALES (MOST RECENT FISCAL YEAR)**	.42	.26	.53	.45	.41	.41
TOTAL	52	5	8	12	17	10
EXPECTED IS BUDGET INCREASE FOR NEXT FISCAL YEAR**	6.17	1.65	7.68	8.01	8.16	4.89

* UNWEIGHTED DATA

** DATA WEIGHTED BY INFORMATION SYSTEMS EXPENSE BUDGET

*** QUESTION WAS REWORDED AND RESULTS MAY NOT BE COMPARABLE WITH PREVIOUS YEARS

TABLE 4-2
BUDGET EXPENSES ***
-- RETAILERS

		TOTAL ANNUAL COMPANY SALES (IN MILLIONS OF DOLLARS)				
	AVERAGE	$ 50-249	$ 250-499	$ 500-999	$ 1000-2999	$ 3 BILLION+
TOTAL	36	5	7	9	9	6
BUDGET DOLLARS ALLOCATED TO IS DEPARTMENT SALARIES AND WAGES, INCLUDING FRINGE BENEFITS*	2844901	231191	774492	1084714	3638980	8887634
TOTAL	36	5	7	9	9	6
BUDGET DOLLARS ALLOCATED TO IS DEPARTMENT SALARIES AND WAGES, EXCLUDING FRINGE BENEFITS*	2331308	109169	624812	1015351	2945358	7226863
TOTAL	36	5	7	9	10	5
BUDGET DOLLARS ALLOCATED TO ALL IS DEPARTMENT EXPENSES*	6160995	473879	1566262	2382772	6499684	24404158
TOTAL	33	4	7	8	9	5
PERCENTAGE OF NET COMPANY SALES BUDGETED TO IS DEPARTMENT (THIS FISCAL YEAR)**	.40	.36	.53	.29	.48	.37
TOTAL	33	4	7	8	9	5
ACTUAL IS EXPENSE AS A PERCENTAGE OF NET COMPANY SALES (MOST RECENT FISCAL YEAR)**	.41	.32	.53	.28	.48	.39
TOTAL	35	4	7	9	10	5
EXPECTED IS BUDGET INCREASE FOR NEXT FISCAL YEAR**	6.38	2.09	7.72	10.91	8.10	4.62

* UNWEIGHTED DATA

** DATA WEIGHTED BY INFORMATION SYSTEMS EXPENSE BUDGET

*** QUESTION WAS REWORDED AND RESULTS MAY NOT BE COMPARABLE WITH PREVIOUS YEARS

TABLE 4-3
BUDGET EXPENSES *** -- WHOLESALERS

	AVERAGE
TOTAL	17
BUDGET DOLLARS ALLOCATED TO IS DEPARTMENT SALARIES AND WAGES, INCLUDING FRINGE BENEFITS*	4243491
TOTAL	16
BUDGET DOLLARS ALLOCATED TO IS DEPARTMENT SALARIES AND WAGES, EXCLUDING FRINGE BENEFITS*	3926640
TOTAL	18
BUDGET DOLLARS ALLOCATED TO ALL IS DEPARTMENT EXPENSES*	
TOTAL	16
PERCENTAGE OF NET COMPANY SALES BUDGETED TO IS DEPARTMENT (THIS FISCAL YEAR)**	.46
TOTAL	15
ACTUAL IS EXPENSE AS A PERCENTAGE OF NET COMPANY SALES (MOST RECENT FISCAL YEAR)**	.43
TOTAL	17
EXPECTED IS BUDGET INCREASE FOR NEXT FISCAL YEAR**	5.94

* UNWEIGHTED DATA

** DATA WEIGHTED BY INFORMATION SYSTEMS EXPENSE BUDGET

*** QUESTION WAS REWORDED AND RESULTS MAY NOT BE COMPARABLE WITH PREVIOUS YEARS

SOURCE: INFORMATION SYSTEMS STUDY, FOOD MARKETING INSTITUTE, 1988

3 F. WHAT PERCENTAGE OF YOUR TOTAL IS BUDGET IS ALLOCATED TO: 1) STORE SYSTEMS, 2) HEADQUARTERS/DISTRIBUTION CENTER SYSTEMS?

TABLE 5-1
PERCENTAGE OF TOTAL IS EXPENSE BUDGET ALLOCATED TO: -- ALL COMPANIES

		TOTAL ANNUAL COMPANY SALES (IN MILLIONS OF DOLLARS)				
	AVERAGE	$ 50-249	$ 250-499	$ 500-999	$ 1000-2999	$ 3 BILLION+
TOTAL	49	5	8	13	15	8
STORE SYSTEMS	15.3	7.1	11.2	19.7	13.2	15.7
HEADQUARTER/DIST. CTR. SYSTEMS	84.7	92.9	88.8	80.3	86.8	84.3

NOTE: DATA WEIGHTED BY INFORMATION SYSTEMS EXPENSE BUDGET

SOURCE: INFORMATION SYSTEMS STUDY, FOOD MARKETING INSTITUTE, 1988

TABLE 5-2
PERCENTAGE OF TOTAL IS EXPENSE BUDGET ALLOCATED TO: -- RETAILERS

		TOTAL ANNUAL COMPANY SALES (IN MILLIONS OF DOLLARS)				
	AVERAGE	$ 50-249	$ 250-499	$ 500-999	$ 1000-2999	$ 3 BILLION+
TOTAL	33	4	7	9	9	4
STORE SYSTEMS	15.7	8.7	11.9	19.1	8.3	20.3
HEADQUARTER/DIST. CTR. SYSTEMS	84.3	91.3	88.1	80.9	91.7	79.7

NOTE: DATA WEIGHTED BY INFORMATION SYSTEMS EXPENSE BUDGET

SOURCE: INFORMATION SYSTEMS STUDY, FOOD MARKETING INSTITUTE, 1988

TABLE 5-3
PERCENTAGE OF TOTAL IS EXPENSE BUDGET ALLOCATED TO: -- WHOLESALERS

	AVERAGE
TOTAL	16
STORE SYSTEMS	14.9
HEADQUARTER/DIST. CTR. SYSTEMS	85.1

NOTE: DATA WEIGHTED BY INFORMATION SYSTEMS EXPENSE BUDGET

SOURCE: INFORMATION SYSTEMS STUDY, FOOD MARKETING INSTITUTE, 1988

Q6. DOES THE IS DEPARTMENT HAVE BUDGETARY RESPONSIBILITY FOR:

TABLE 6-1

RESPONSIBILITIES OF IS DEPARTMENT ** -- ALL COMPANIES

		TOTAL ANNUAL COMPANY SALES (IN MILLIONS OF DOLLARS)				
	AVERAGE	$ 50-249	$ 250-499	$ 500-999	$ 1000-2999	$ 3 BILLION+
TOTAL	73	15	10	18	17	13
PERSONAL COMPUTERS	61.6	60.0	50.0	66.7	58.8	69.2
WORD PROCESSING	41.1	33.3	20.0	44.4	41.2	61.5
VOICE	35.6	26.7	10.0	44.4	47.1	38.5
RETAIL SERVICES	34.2	33.3	20.0	50.0	35.3	23.1
MAIL ROOM	12.3	6.7	-	27.8	5.9	15.4

** MULTIPLE RESPONSES ACCEPTED

NOTE: UNWEIGHTED DATA

SOURCE: INFORMATION SYSTEMS STUDY, FOOD MARKETING INSTITUTE, 1988

TABLE 6-2

RESPONSIBILITIES OF IS DEPARTMENT ** -- RETAILERS

		TOTAL ANNUAL COMPANY SALES (IN MILLIONS OF DOLLARS)				
	AVERAGE	$ 50-249	$ 250-499	$ 500-999	$ 1000-2999	$ 3 BILLION+
TOTAL	53	13	9	13	10	8
PERSONAL COMPUTERS	64.2	61.5	44.4	76.9	70.0	62.5
WORD PROCESSING	41.5	38.5	22.2	46.2	40.0	62.5
VOICE	39.6	30.8	11.1	46.2	60.0	50.0
RETAIL SERVICES	35.8	38.5	22.2	53.8	40.0	12.5
MAIL ROOM	15.1	7.7	-	38.5	-	25.0

** MULTIPLE RESPONSES ACCEPTED

NOTE: UNWEIGHTED DATA

SOURCE: INFORMATION SYSTEMS STUDY, FOOD MARKETING INSTITUTE, 1988

TABLE 6-3
RESPONSIBILITIES OF IS DEPARTMENT ** -- WHOLESALERS

	AVERAGE
TOTAL	20
PERSONAL COMPUTERS	55.0
WORD PROCESSING	40.0
RETAIL SERVICES	30.0
VOICE	25.0
MAIL ROOM	5.0

** MULTIPLE RESPONSES ACCEPTED

NOTE: UNWEIGHTED DATA

SOURCE: INFORMATION SYSTEMS STUDY, FOOD MARKETING INSTITUTE, 1988

TIME ALLOCATION

The results of this study for the past five years indicate that about 55 percent of an IS department's time is spent on new applications or major enhancements for existing systems: 15 percent for store systems and 40 percent for headquarters or distribution center systems. Between 7 and 14 percent of the time was devoted to internal IS projects. Most of the remainder of activity involved maintenance or problem solving.

Q4.	WHAT PERCENT OF SYSTEMS DEVELOPMENT ACTIVITY INCLUDING YOUR OWN AND VENDOR TIME IS ALLOCATED TO:

TABLE 7-1

PERCENTAGE OF TIME ALLOCATED TO IS ACTIVITIES -- ALL COMPANIES

		TOTAL ANNUAL COMPANY SALES (IN MILLIONS OF DOLLARS)				
	AVERAGE	$ 50-249	$ 250-499	$ 500-999	$ 1000-2999	$ 3 BILLION+
TOTAL	65	11	10	18	16	10
NEW APPLICATIONS/MAJOR ENHANCEMENTS FOR:						
STORE SYSTEMS	14.8	19.5	14.2	15.0	15.9	13.6
HEADQUARTER/DIST. CENTER SYSTEMS	37.9	44.8	35.0	36.8	42.1	34.7
INTERNAL IS PROJECTS	7.8	5.9	9.8	9.0	5.7	9.1
MAINTENANCE/PROBLEM SOLVING	38.8	29.3	41.0	37.9	36.3	41.4
OTHER	.8	.4	0	1.4	.1	1.3

NOTE: DATA WEIGHTED BY TOTAL NUMBER OF SYSTEMS EMPLOYEES

SOURCE: INFORMATION SYSTEMS STUDY, FOOD MARKETING INSTITUTE, 1988

TABLE 7-2

PERCENTAGE OF TIME ALLOCATED TO IS ACTIVITIES -- RETAILERS

		TOTAL ANNUAL COMPANY SALES (IN MILLIONS OF DOLLARS)				
	AVERAGE	$ 50-249	$ 250-499	$ 500-999	$ 1000-2999	$ 3 BILLION+
TOTAL	47	9	9	13	9	7
NEW APPLICATIONS/MAJOR ENHANCEMENTS FOR:						
STORE SYSTEMS	15.1	39.8	13.4	14.7	12.7	16.0
HEADQUARTER/DIST. CENTER SYSTEMS	37.1	33.9	34.7	39.1	46.2	31.3
INTERNAL IS PROJECTS	6.6	6.9	10.2	8.8	3.5	7.6
MAINTENANCE/PROBLEM SOLVING	40.8	18.5	41.7	35.0	37.5	45.1
OTHER	.4	.9	0	2.3	.2	0

NOTE: DATA WEIGHTED BY TOTAL NUMBER OF SYSTEMS EMPLOYEES

SOURCE: INFORMATION SYSTEMS STUDY, FOOD MARKETING INSTITUTE, 1988

TABLE 7-3
PERCENTAGE OF TIME ALLOCATED TO IS ACTIVITIES -- WHOLESALERS

	AVERAGE
TOTAL	18
NEW APPLICATIONS/MAJOR ENHANCEMENTS FOR:	
STORE SYSTEMS	14.1
HEADQUARTER/DIST. CENTER SYSTEMS	39.3
INTERNAL IS PROJECTS	9.8
MAINTENANCE/PROBLEM SOLVING	35.2
OTHER	1.6

NOTE: DATA WEIGHTED BY TOTAL NUMBER OF SYSTEMS EMPLOYEES

SOURCE: INFORMATION SYSTEMS STUDY, FOOD MARKETING INSTITUTE, 1988

DISASTER RECOVERY PLANS

About fifty percent of companies surveyed this year had a disaster recovery plan which they reviewed during the past twelve months, an increase of 15 percent over the past two years. Of those firms, 41 percent worked with a remote hot sight which contains a system available for immediate use at any time. Another 17 percent used a remote cold site which is similar to a hot sight though not available twenty-four hours a day. Dual sites were used by 20 percent while the remainder used other types of plans.

Q5a.	DO YOU HAVE A FORMAL DISASTER RECOVERY PLAN THAT HAS BEEN REVIEWED IN THE PAST TWELVE MONTHS?

Q5b.	WHAT TYPE OF DISASTER RECOVERY PLAN DO YOU HAVE?

Q5c.	HAVE YOU TESTED THE DISASTER RECOVERY PLAN IN THE LAST SIX MONTHS?

TABLE 8-1

FORMAL DISASTER RECOVERY PLAN -- ALL COMPANIES

		TOTAL ANNUAL COMPANY SALES (IN MILLIONS OF DOLLARS)				
	AVERAGE	$ 50-249	$ 250-499	$ 500-999	$ 1000-2999	$ 3 BILLION+
TOTAL	74	15	11	18	17	13
HAVE FORMAL DISASTER RECOVERY PLAN WHICH HAS BEEN REVIEWED IN PAST 12 MONTHS	50.0	40.0	36.4	38.9	58.8	76.9
TYPE OF DISASTER RECOVERY PLAN:						
TOTAL	37	6	4	7	10	10
REMOTE HOT SITE	40.5	33.3	25.0	57.1	30.0	50.0
REMOTE COLD SITE	16.2	16.7	25.0	-	30.0	10.0
DUAL SITE	18.9	16.7	25.0	14.3	20.0	20.0
OTHER	21.6	33.3	-	28.6	20.0	20.0
TOTAL	68	14	10	16	17	11
DISASTER RECOVERY PLAN TESTED IN LAST SIX MONTHS	30.9	21.4	20.0	18.8	52.9	36.4

NOTE: UNWEIGHTED DATA

SOURCE: INFORMATION SYSTEMS STUDY, FOOD MARKETING INSTITUTE, 1988

TABLE 8-2

FORMAL DISASTER RECOVERY PLAN -- RETAILERS

		TOTAL ANNUAL COMPANY SALES (IN MILLIONS OF DOLLARS)				
	AVERAGE	$ 50-249	$ 250-499	$ 500-999	$ 1000-2999	$ 3 BILLION+
TOTAL	54	13	10	13	10	8
HAVE FORMAL DISASTER RECOVERY PLAN WHICH HAS BEEN REVIEWED IN PAST 12 MONTHS	50.0	46.2	40.0	38.5	60.0	75.0
TYPE OF DISASTER RECOVERY PLAN:						
TOTAL	26	6	3	5	6	6
REMOTE HOT SITE	38.5	33.3	33.3	40.0	33.3	50.0
REMOTE COLD SITE	23.1	16.7	33.3	-	50.0	16.7
DUAL SITE	23.1	16.7	33.3	20.0	16.7	33.3
OTHER	15.4	33.3	-	40.0	-	-
TOTAL	49	13	9	11	10	6
DISASTER RECOVERY PLAN TESTED IN LAST SIX MONTHS	22.4	23.1	22.2	9.1	40.0	16.7

NOTE: UNWEIGHTED DATA

SOURCE: INFORMATION SYSTEMS STUDY, FOOD MARKETING INSTITUTE, 1988

TABLE 8-3
FORMAL DISASTER RECOVERY PLAN -- WHOLESALERS

	AVERAGE	TYPE OF DISASTER RECOVERY PLAN:			
TOTAL	20	TOTAL	11	TOTAL	19
HAVE FORMAL DISASTER RECOVERY PLAN WHICH HAS BEEN REVIEWED IN PAST 12 MONTHS	50.0	REMOTE HOT SITE	45.5	DISASTER RECOVERY PLAN TESTED IN LAST SIX MONTHS	52.6
		REMOTE COLD SITE	-		
		DUAL SITE	9.1		
		OTHER	36.4		

NOTE: UNWEIGHTED DATA

SOURCE: INFORMATION SYSTEMS STUDY, FOOD MARKETING INSTITUTE, 1988

EXPERIENCE WITH SELECTED TECHNOLOGIES

Each year this study indicates more firms are moving into the advanced use stage of various technologies. For example, 39.7 percent of this year's respondents report advanced use of personal computers with a mainframe connection, compared with 34.4 percent, 18.8 percent, and 13.3 percent for 1987, 1986, and 1985 respectively. Similar trends are found for data bases, distributed processing in-store, and ATMs.

This year's study looked at electronic shelf tags for the first time. Almost 36 percent of the respondents were evaluating these devices and 10 percent reported limited or advanced use. UCS/DSD was being evaluated by almost 47 percent of firms surveyed and EFT-POS systems by 44.9 percent.

Almost 88 percent of the responding companies have retail automation, a slight increase from last year's 84.6 percent. Popular uses of retail automation include scan interface, time and attendance, electronic mail, and DSD. This year, 8.4 percent reported using it for labor scheduling, up slightly from 1987. Electronic labor saving devices are one way of increasing the efficiency of the shrinking labor force available at the store level.

Q7.	PLEASE CIRCLE THE CORRESPONDING NUMBER IN THE GRID INDICATING THE HIGHEST LEVEL THAT YOUR COMPANY HAS EXPERIENCED FOR THAT TECHNOLOGY AND THE NUMBER OF STORES INVOLVED.

FIGURE 5

PERCENTAGE OF COMPANIES REPORTING ADVANCED USE OF SELECTED TECHNOLOGIES

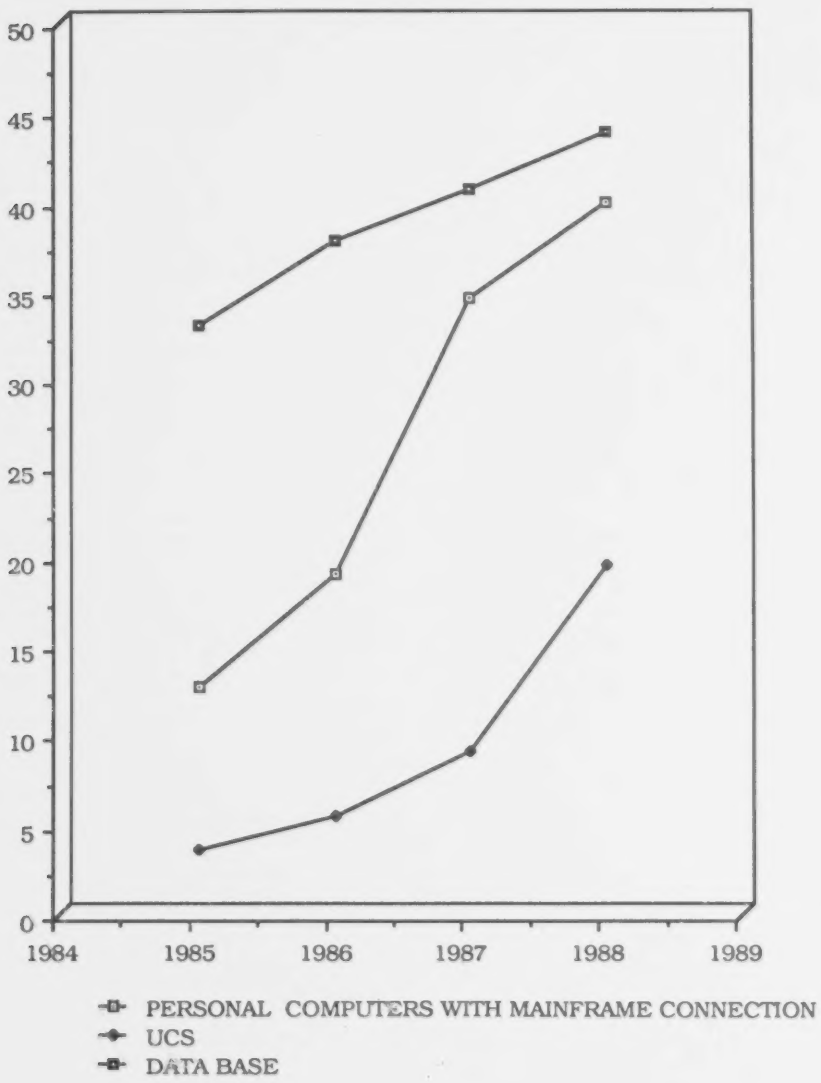


TABLE 9
EXPERIENCE WITH SELECTED TECHNOLOGIES (PERCENTAGE OF COMPANIES RESPONDING IN EACH CATEGORY)

	EVALUATION	DEVELOPMENT	LIMITED USE	ADVANCED USE	NOT APPLICABLE	TOTAL
INFORMATION CENTER	10.1	7.2	27.5	36.2	18.8	69 100.0
DATA BASE	12.7	8.5	23.9	43.7	11.3	71 100.0
DISTRIBUTED PROCESSING BETWEEN DIVISIONS	8.5	1.4	16.9	25.4	47.9	71 100.0
DISTRIBUTED PROCESSING IN-STORE	15.9	13.0	20.3	29.0	21.7	69 100.0
COMPUTER ASSISTED SYSTEMS ENGINERING (CASE)	37.3	4.5	-	9.0	49.3	67 100.0
ELECTRONIC SHELF TAGS	35.7	2.9	5.7	4.3	51.4	70 100.0
COMPUTER GRAPHICS	11.4	4.3	50.0	10.0	24.3	70 100.0
PERSONAL COMPUTERS WITH MAINFRAME CONNECTION	4.1	2.7	47.9	39.7	5.5	73 100.0
EFT/ACH	40.3	3.0	11.9	10.4	34.3	67 100.0
ATM	18.5	1.5	29.2	20.0	30.8	65 100.0
EFT-POS	44.9	2.9	10.1	10.1	31.9	69 100.0
UCS	32.8	9.0	20.9	19.4	17.9	67 100.0
UCS/DSD	47.7	9.2	4.6	6.2	32.3	65 100.0
BARCODES FOR STORE ITEMS	8.5	-	9.9	74.6	7.0	71 100.0
BARCODES FOR WAREHOUSE ITEMS	26.2	1.5	13.8	33.8	24.6	65 100.0
EXPERT SYSTEMS	37.3	3.0	10.4	-	49.3	67 100.0
ON-LINE DOCUMENTATION	21.4	4.3	42.9	8.6	22.9	70 100.0
ON-LINE TRAINING	25.7	8.6	28.6	10.0	27.1	70 100.0

NOTE: UNWEIGHTED DATA

SOURCE: INFORMATION SYSTEMS STUDY, FOOD MARKETING INSTITUTE, 1988

Q8a. DO YOU HAVE ANY RETAIL AUTOMATION?

TABLE 10-1
PERCENTAGE OF COMPANIES USING RETAIL AUTOMATION -- ALL COMPANIES

	TOTAL ANNUAL COMPANY SALES (IN MILLIONS OF DOLLARS)					
	AVERAGE	$ 50-249	$ 250-499	$ 500-999	$ 1000-2999	$ 3 BILLION+
TOTAL	74	15	11	18	17	13
HAVE RETAIL AUTOMATION	87.8	86.7	90.9	83.3	94.1	84.6
DO NOT HAVE RETAIL AUTOMATION	12.2	13.3	9.1	16.7	5.9	15.4

NOTE: UNWEIGHTED DATA

SOURCE: INFORMATION SYSTEMS STUDY, FOOD MARKETING INSTITUTE, 1988

TABLE 10-2
PERCENTAGE OF COMPANIES USING RETAIL AUTOMATION -- RETAILERS

	TOTAL ANNUAL COMPANY SALES (IN MILLIONS OF DOLLARS)					
	AVERAGE	$ 50-249	$ 250-499	$ 500-999	$ 1000-2999	$ 3 BILLION+
TOTAL	54	13	10	13	10	8
HAVE RETAIL AUTOMATION	85.2	84.6	90.0	76.9	100.0	75.0
DO NOT HAVE RETAIL AUTOMATION	14.8	15.4	10.0	23.1	-	25.0

NOTE: UNWEIGHTED DATA

SOURCE: INFORMATION SYSTEMS STUDY, FOOD MARKETING INSTITUTE, 1988

TABLE 10-3
PERCENTAGE OF COMPANIES USING RETAIL AUTOMATION -- WHOLESALERS

	AVERAGE
TOTAL	20
HAVE RETAIL AUTOMATION	95.0
DO NOT HAVE RETAIL AUTOMATION	5.0

NOTE: UNWEIGHTED DATA

SOURCE: INFORMATION SYSTEMS STUDY, FOOD MARKETING INSTITUTE, 1988

Q8b. FOR PERSONAL COMPUTERS AND/OR MINI COMPUTERS, PLEASE INDICATE THE NUMBER OF STORES IN WHICH RETAIL AUTOMATION IS BEING TESTED OR IS IN FINAL PRODUCTION.

TABLE 11
PERCENTAGE OF STORES USING RETAIL AUTOMATION

	TEST		PRODUCTION	
	PC	MINI	PC	MINI
TOTAL	7714	7714	7714	7714
DSD	.1	.2	11.9	2.3
LABOR SCHEDULING	.4	.1	1.9	6.5
VIDEO RENTALS	.3	.1	7.6	3.2
ELECTRONIC MAIL	-	-	14.9	6.4
SCAN INTERFACE	.4	.1	7.4	19.3
PHARMACY	-	.4	6.6	9.5
ADMINISTRATION	.1	-	9.2	2.7
TIME AND ATTENDANCE	.1	.6	16.1	5.1
SCALE INTERCONNECT	.1	.1	2.1	11.2
OTHER	-	-	4.0	4.1

NOTE: UNWEIGHTED DATA

SOURCE: INFORMATION SYSTEMS STUDY, FOOD MARKETING INSTITUTE, 1988

VOICE AND DATA COMMUNICATIONS

As noted in the foreword to this report, the information systems function is tying the various and often far-flung parts of the food distribution industry together. Telecommunications thus form an important link in the system, connecting warehouse, store, headquarters, and in some cases, manufacturers. Recognizing this importance, this year's study examined the voice and data communications elements of the IS department.

The study found that the communications staff reported to a single manager in 51.4 percent of the responding firms (Table 12). In over 90 percent of those companies, that manager was in the information systems department (Table 13).

The average company spent approximately $1 million on telecommunications in 1987: $620,000 for voice communication, $382,000 for data communications, and $21,000 in miscellaneous areas (Table 14).

Over half the firms used key telephone systems in their stores (Table 15). Only 30 percent used T1 transmission facilities in their business (Table 16). Almost 53 percent of wholesalers used these facilities compared with 22.4 percent of retailers surveyed.

Q9.	DOES YOUR VOICE AND DATA COMMUNICATIONS STAFF REPORT TO A SINGLE MANAGER?
	IS THAT MANAGER IN YOUR INFORMATION SYSTEMS DEPARTMENT?
	WHAT IS YOUR ANNUAL TELECOMMUNICATIONS COST FOR :
	WHAT TYPE OF TELEPHONE SYSTEMS DO YOU USE IN YOUR STORES?
	DO YOU USE TRANSMISSION FACILITIES IN YOUR BUSINESS?
	DO THEY CONNECT: DATA CENTERS, REGIONAL OR LATA HUBS, STORES?

TABLE 12-1
PERCENTAGE OF COMMUNICATIONS STAFF REPORTING TO A SINGLE MANAGER -- ALL COMPANIES

	TOTAL ANNUAL COMPANY SALES (IN MILLIONS OF DOLLARS)					
	AVERAGE	$ 50-249	$ 250-499	$ 500-999	$ 1000-2999	$ 3 BILLION+
TOTAL	70	12	11	18	16	13
REPORTS TO A SINGLE MANAGER	51.4	58.3	36.4	44.4	50.0	69.2
DOES NOT REPORT TO A SINGLE MANAGER	48.6	41.7	63.6	55.6	50.0	30.8

NOTE: UNWEIGHTED DATA

SOURCE: INFORMATION SYSTEMS STUDY, FOOD MARKETING INSTITUTE, 1988

TABLE 12-2
PERCENTAGE OF COMMUNICATIONS STAFF REPORTING TO A SINGLE MANAGER -- RETAILERS

	TOTAL ANNUAL COMPANY SALES (IN MILLIONS OF DOLLARS)					
	AVERAGE	$ 50-249	$ 250-499	$ 500-999	$ 1000-2999	$ 3 BILLION+
TOTAL	51	11	10	13	9	8
REPORTS TO A SINGLE MANAGER	54.9	63.6	40.0	46.2	55.6	75.0
DOES NOT REPORT TO A SINGLE MANAGER	45.1	36.4	60.0	53.8	44.4	25.0

NOTE: UNWEIGHTED DATA

SOURCE: INFORMATION SYSTEMS STUDY, FOOD MARKETING INSTITUTE, 1988

TABLE 12-3
PERCENTAGE OF COMMUNICATIONS STAFF REPORTING TO A SINGLE MANAGER -- WHOLESALERS

	AVERAGE
TOTAL	19
REPORTS TO A SINGLE MANAGER	42.1
DOES NOT REPORT TO A SINGLE MANAGER	57.9

NOTE: UNWEIGHTED DATA

SOURCE: INFORMATION SYSTEMS STUDY, FOOD MARKETING INSTITUTE, 1988

TABLE 13-1
PERCENTAGE OF MANAGERS IN INFORMATION SYSTEMS DEPARTMENT -- ALL COMPANIES

		TOTAL ANNUAL COMPANY SALES (IN MILLIONS OF DOLLARS)				
	AVERAGE	$ 50-249	$ 250-499	$ 500-999	$ 1000-2999	$ 3 BILLION+
TOTAL	36	7	4	8	8	9
MANAGER IS IN INFORMATION DEPARTMENT	91.7	100.0	100.0	87.5	100.0	77.8
MANAGER IS NOT IN INFORMATION DEPARTMENT	8.3	-	-	12.5	-	22.2

NOTE: UNWEIGHTED DATA

SOURCE: INFORMATION SYSTEMS STUDY, FOOD MARKETING INSTITUTE, 1988

TABLE 13-2
PERCENTAGE OF MANAGERS IN INFORMATION SYSTEMS DEPARTMENT -- RETAILERS

		TOTAL ANNUAL COMPANY SALES (IN MILLIONS OF DOLLARS)				
	AVERAGE	$ 50-249	$ 250-499	$ 500-999	$ 1000-2999	$ 3 BILLION+
TOTAL	28	7	4	6	5	6
MANAGER IS IN INFORMATION DEPARTMENT	96.4	100.0	100.0	100.0	100.0	83.3
MANAGER IS NOT IN INFORMATION DEPARTMENT	3.6	-	-	-	-	16.7

NOTE: UNWEIGHTED DATA

SOURCE: INFORMATION SYSTEMS STUDY, FOOD MARKETING INSTITUTE, 1988

TABLE 13-3
PERCENTAGE OF MANAGERS IN INFORMATION SYSTEMS DEPARTMENT -- WHOLESALERS

	AVERAGE
TOTAL	8
MANAGER IS IN INFORMATION DEPARTMENT	75.0
MANAGER IS NOT IN INFORMATION DEPARTMENT	25.0

NOTE: UNWEIGHTED DATA

SOURCE: INFORMATION SYSTEMS STUDY, FOOD MARKETING INSTITUTE, 1988

9 C. WHAT IS YOUR ANNUAL TELECOMMUNICATIONS COST FOR :

TABLE 14-1
ANNUAL TELECOMMUNICATIONS COSTS -- ALL COMPANIES

		TOTAL ANNUAL COMPANY SALES (IN MILLIONS OF DOLLARS)				
	AVERAGE	$ 50-249	$ 250-499	$ 500-999	$ 1000-2999	$ 3 BILLION+
TOTAL	37	3	6	12	7	9
VOICE	619741	56000	51333	225031	541233	1773934
TOTAL	37	3	6	12	7	9
DATA	381770	25933	33745	38032	201970	1330560
TOTAL	37	3	6	12	7	9
OTHER	20324	0	0	27083	0	47444
TOTAL	38	3	6	13	7	9
TOTAL COSTS	996523	81933	85079	272442	743202	3151938

* UNWEIGHTED DATA

SOURCE: INFORMATION SYSTEMS STUDY, FOOD MARKETING INSTITUTE, 1988

TABLE 14-2
ANNUAL TELECOMMUNICATIONS COSTS -- RETAILERS

		TOTAL ANNUAL COMPANY SALES (IN MILLIONS OF DOLLARS)				
	AVERAGE	$ 50-249	$ 250-499	$ 500-999	$ 1000-2999	$ 3 BILLION+
TOTAL	24	2	5	8	3	6
VOICE	624120	84000	59200	189733	883203	1724567
TOTAL	24	2	5	8	3	6
DATA	446533	8000	38894	36172	315800	1544922
TOTAL	24	2	5	8	3	6
OTHER	1042	0	0	3125	0	0
TOTAL	24	2	5	8	3	6
TOTAL COSTS	1071694	92000	98094	229031	1199000	3269490

* UNWEIGHTED DATA

SOURCE: INFORMATION SYSTEMS STUDY, FOOD MARKETING INSTITUTE, 1988

TABLE 14-3
ANNUAL TELECOMMUNICATIONS COSTS -- WHOLESALERS

	AVERAGE
TOTAL	13
VOICE	611656
TOTAL	13
DATA	262207
TOTAL	13
OTHER	55923
TOTAL	14
TOTAL COSTS	867659

* UNWEIGHTED DATA

SOURCE: INFORMATION SYSTEMS STUDY, FOOD MARKETING INSTITUTE, 1988

9 D. WHAT TYPE OF TELEPHONE SYSTEMS DO YOU USE IN YOUR STORES?

TABLE 15-1
TELEPHONE SYSTEMS -- ALL COMPANIES

		TOTAL ANNUAL COMPANY SALES (IN MILLIONS OF DOLLARS)				
	AVERAGE	$ 50-249	$ 250-499	$ 500-999	$ 1000-2999	$ 3 BILLION+
TOTAL	74	15	11	18	17	13
KEY SYSTEMS	51.4	33.3	63.6	66.7	47.1	46.2
PBX	24.3	13.3	27.3	33.3	23.5	23.1
CENTREX	12.2	13.3	-	11.1	17.6	15.4

NOTE: UNWEIGHTED DATA

SOURCE: INFORMATION SYSTEMS STUDY, FOOD MARKETING INSTITUTE, 1988

TABLE 15-2
TELEPHONE SYSTEMS -- RETAILERS

		TOTAL ANNUAL COMPANY SALES (IN MILLIONS OF DOLLARS)				
	AVERAGE	$ 50-249	$ 250-499	$ 500-999	$ 1000-2999	$ 3 BILLION+
TOTAL	54	18	10	13	10	8
KEY SYSTEMS	57.4	38.5	60.0	76.9	50.0	62.5
PBX	14.8	15.4	20.0	23.1	10.0	-
CENTREX	11.1	15.4	-	7.7	10.0	25.0

NOTE: UNWEIGHTED DATA

SOURCE: INFORMATION SYSTEMS STUDY, FOOD MARKETING INSTITUTE, 1988

TABLE 15-3
TELEPHONE SYSTEMS -- WHOLESALERS

	AVERAGE
TOTAL	20
KEY SYSTEMS	35.0
PBX	50.0
CENTREX	15.0

NOTE: UNWEIGHTED DATA

SOURCE: INFORMATION SYSTEMS STUDY, FOOD MARKETING INSTITUTE, 1988

TABLE 16-1
T1 TRANMISSION FACILITIES
-- ALL COMPANIES

		TOTAL ANNUAL COMPANY SALES (IN MILLIONS OF DOLLARS)				
	AVERAGE	$ 50-249	$ 250-499	$ 500-999	$ 1000-2999	$ 3 BILLION+
TOTAL	66	11	10	17	16	12
USE T1 TRANSMISSION FACILITIES	30.3	-	10.0	29.4	43.8	58.3
DO NOT USE T1 TRANSMISSION FACILITIES	69.7	100.0	90.0	70.6	56.3	41.7

NOTE: UNWEIGHTED DATA

SOURCE: INFORMATION SYSTEMS STUDY, FOOD MARKETING INSTITUTE, 1988

TABLE 16-2
T1 TRANMISSION FACILITIES
-- RETAILERS

		TOTAL ANNUAL COMPANY SALES (IN MILLIONS OF DOLLARS)				
	AVERAGE	$ 50-249	$ 250-499	$ 500-999	$ 1000-2999	$ 3 BILLION+
TOTAL	49	11	9	13	9	7
USE T1 TRANSMISSION FACILITIES	22.4	-	11.1	15.4	44.4	57.1
DO NOT USE T1 TRANSMISSION FACILITIES	77.6	100.0	88.9	84.6	55.6	42.9

NOTE: UNWEIGHTED DATA

SOURCE: INFORMATION SYSTEMS STUDY, FOOD MARKETING INSTITUTE, 1988

TABLE 16-3
T1 TRANMISSION FACILITIES
-- WHOLESALERS

	AVERAGE
TOTAL	17
USE T1 TRANSMISSION FACILITIES	52.9
DO NOT USE T1 TRANSMISSION FACILITIES	47.1

NOTE: UNWEIGHTED DATA

SOURCE: INFORMATION SYSTEMS STUDY, FOOD MARKETING INSTITUTE, 1988

TABLE 17-1

T1 TRANSMISSIONS CONNECTIONS -- ALL COMPANIES

		TOTAL ANNUAL COMPANY SALES (IN MILLIONS OF DOLLARS)				
	AVERAGE	$ 50-249	$ 250-499	$ 500-999	$ 1000-2999	$ 3 BILLION+
TOTAL	20	0	1	5	7	7
DATA CENTERS	55.0	-	-	40.0	71.4	57.1
REGIONAL OR LATA HUBS	35.0	-	-	60.0	14.3	42.9
STORES?	30.0	-	100.0	20.0	42.9	14.3

NOTE: UNWEIGHTED DATA

SOURCE: INFORMATION SYSTEMS STUDY, FOOD MARKETING INSTITUTE, 1988

METHODOLOGY

The 1988 survey questionnaires were mailed to the Vice President of Information Systems of FMI member companies with annual sales of $50 million or greater. With follow-up mailings, usable questionnaires were returned by 74 companies. A copy of the questionnaire has been included in this report. A profile of the respondents appears in Table 18.

The survey results have been tabulated by the size of the company and whether the company is a retailer or a wholesaler. Where appropriate, the reported averages have been weighted by the size of company.

The companion publication, FMI's 1988 *Information Systems Directory*, provides information on hardware, software and systems development activities from many food retailers and wholesalers. It may be ordered from FMI's publication sales department.

TABLE 18-1
NUMBER OF RESPONDENTS BY SIZE AND TYPE OF COMPANY

		TOTAL ANNUAL COMPANY SALES (IN MILLIONS OF DOLLARS)				
	AVERAGE	$ 50-249	$ 250-499	$ 500-999	$ 1000-2999	$ 3 BILLION+
TOTAL	74	15	11	18	17	13
RETAILERS	54	13	10	13	10	8
WHOLESALERS	20	2	1	5	7	5

NOTE: UNWEIGHTED DATA

SOURCE: INFORMATION SYSTEMS STUDY, FOOD MARKETING INSTITUTE, 1988

1989 INFORMATION SYSTEMS CONFERENCE

The 1989 FMI Information Systems Conference will focus on timely information service problems, opportunities and the latest trends in the "state of the art". This conference is targeted to help the MIS executive update, expand and enhance both technical and management skills. Informal discussion groups offer the opportunity to exchange ideas and discuss concerns with their peers. The conference will be held September 17-20, 1989 at the Marriot Hotel/Long Wharf in Boston, Massachusetts. For further information, please call the FMI education department at 202-429-8517.

SAMPLE QUESTIONNAIRE

Following is a sample of the survey instrument used to gather the data in the *Information Systems Study, 1988*

Each year, FMI conducts a survey on the information system (IS) activities of member companies. The purpose of the survey is to provide executives responsible for information systems with current statistics that will be helpful in assessing the performance of their own company's operation.

In responding to this survey, please:

- o Answer as many questions as possible.
- o Only include information relating to divisions/departments that are involved with the information systems department.

All data will be held in strict confidence. If you have any questions please call FMI's research department at 202-429-8279.

INFORMATION SYSTEMS DEPARTMENT STAFFING

1. Please provide the number of employees in your company directly involved in the information systems function. You may use fractional allocations where appropriate. (Employees listed in Question 1 will typically be part of the IS department/division, not a user group.)

	Number of Employees in Information Systems Department	Totals
IS Administration:		
General Administration/Secretarial	_____	
Senior Management	_____	
Total Management		_____
Systems:		
Administration & Management	_____	
Data Base/Data Administration	_____	
Project Management	_____	
Development (Analyst/Programmers)	_____	
Other	_____	
Total Systems		_____
Operations:		
Administration, Management, Supervision	_____	
Operations	_____	
Data Entry Employees	_____	
Other	_____	
Total Operations		_____
Additional Support Areas:		
Store Systems Support	_____	
Scanning Support	_____	
Information Center	_____	
Help Desk	_____	
Data Security	_____	
Telecommunications Voice	_____	
Telecommunications Data	_____	
Technical Support/Systems Programmers	_____	
Retail Automation Support	_____	
Quality Assurance	_____	
Other	_____	
Total Additional Support Areas		_____
TOTAL EMPLOYEES		_____

2. For this fiscal year, please provide the PERCENT OF YOUR TOTAL COMPANY INFORMATION SYSTEMS EXPENSE BUDGET that is your budget responsibility allocated to each of the following areas. Please exclude all equipment and maintenance costs for in-store systems. (Please give percents as two-digit numbers plus one decimal place, i.e. 12.5%)

Wages and Salaries		___.__%
Employee Fringe Benefits		___.__%
Equipment:	Rental and Lease	___.__%
	Maintenance	___.__%
	Depreciation	___.__%
Software Rental, Amortization/Software Purchase		___.__%
Voice Communications		___.__%
Data Communications		___.__%
Service Bureaus		___.__%
Outside Professional Services		___.__%
Education, Training		___.__%
Supplies		___.__%
Overhead (occupancy, copies, printing)		___.__%
Disaster Recovery*		___.__%
Help Desk		___.__%
Personal Computers Retail Service		___.__%
Scanning		___.__%
Other		___.__%
TOTAL		100.0%

* Funds allocated to offsite storage of information and backup computer processing capabilities.

3. Please provide the following IS expense budget numbers for this fiscal year. Only account for those items that are your budget responsibility. (Please give percents as two-digit numbers, i.e., twelve percent = 12%, one tenth of one percent = .10%)

a. Dollars of total company expense budget allocated for IS WAGES AND SALARIES?
   Including fringe benefits.....$_____
   Excluding fringe benefits.....$_____

b. Dollars of TOTAL COMPANY EXPENSE BUDGET for all IS items covered in Question 2 .....$_____

c. Percent of net company SALES BUDGETED FOR THE IS DEPARTMENT for this fiscal year..... .___%

d. Actual IS DOLLARS SPENT for most recently completed fiscal year as a PERCENT of net company sales..... .___%

e. EXPECTED PERCENT INCREASE in your budget for IS items in the upcoming fiscal year.....__.__%

f. What percent of your total IS expense budget is allocated to:
   A. Store Systems.....___%
   B. Headquarter/Distribution Center Systems.....___%
   TOTAL.....100%

g. Would you be willing to provide further details of IS department expenditures? (Circle) Yes 1 No 2

INFORMATION SYSTEMS ACTIVITIES & TECHNOLOGY

4. What percent of systems development activity including your own and vendor time is allocated to:

New applications/major enhancements for:	Store Systems	___%
	Headquarter/Distribution Center Systems	___%
Internal IS projects (research, performance, improvement, etc.)		___%
Maintenance and problem-solving		___%
Other (please list)_____		___%
		100%

5a. Do you have a formal disaster recovery plan that has been reviewed in the last 12 months?
(Please circle) /1/ Yes (Go to Question 5b) /2/ No (Go to Question 5c)

5b. What type of disaster recovery plan do you have:

A. Remote hot site.../1/
B. Remote cold site../2/
C. Dual site.../3/
D. Other...../4/

5c. Have you tested the disaster recovery plan in the last six months?...../1/ Yes /2/ No

6. Does the IS department have budgetary responsibility for:

Mail Room...../1/ Yes /2/ No
Word Processing...../1/ Yes /2/ No
Voice...../1/ Yes /2/ No
Personal Computers...../1/ Yes /2/ No
Retail Services...../1/ Yes /2/ No

7. PLEASE CIRCLE the corresponding number in the grid indicating the HIGHEST level that your company has experienced for that technology and the number of stores involved.

	LEVEL OF EXPERIENCE					
TECHNOLOGY	EVALUATION	DEVELOPMENT	LIMITED USE	ADVANCED USE	NUMBER OF STORES (if applicable)	NOT APPLICABLE
Information Center	1	2	3	4	___ ___ ___	5
Data Base	1	2	3	4	___ ___ ___	5
Distributed Processing Between Divisions	1	2	3	4	___ ___ ___	5
Distributed Processing In-Store	1	2	3	4	___ ___ ___	5
Computer Assisted Systems Engineering (CASE)	1	2	3	4	___ ___ ___	5
Electronic Shelf Tags	1	2	3	4	___ ___ ___	5
Computer Graphics	1	2	3	4	___ ___ ___	5
Personal Computers with Mainframe Connection	1	2	3	4	___ ___ ___	5
EFT/ACH	1	2	3	4	___ ___ ___	5
ATM	1	2	3	4	___ ___ ___	5
EFT/POS (Debit Card at Checkout)	1	2	3	4	___ ___ ___	5
UCS	1	2	3	4	___ ___	5
UCS/DSD	1	2	3	4	___ ___ ___	5
Barcodes for Store Items	1	2	3	4	___ ___ ___	5
Barcodes for Warehouse Items	1	2	3	4	___ ___ ___	5
Expert Systems	1	2	3	4	___ ___ ___	5
On-line Documentation	1	2	3	4	___ ___ ___	5
On-line Training	1	2	3	4	___ ___ ___	5

* Includes: Electronic Mail, Word Processing, Voice Message, Calendar, Desk Top Publishing

8a. Do you have any retail automation? (Please circle 1 or 2) /1/ Yes _____stores (Go to Question 8b)
/2/ No (Go to Question 9)

8b. For personal computers and/or mini computers, please indicate the NUMBER OF STORES in which retail automation is either being tested or is in full production:

	TEST		PRODUCTION	
	PC	MINI	PC	MINI
DSD	_____ stores	_____ stores	_____ stores	_____ stores
Labor Scheduling	_____ stores	_____ stores	_____ stores	_____ stores
Video Rentals	_____ stores	_____ stores	_____ stores	_____ stores
Electronic Mail	_____ stores	_____ stores	_____ stores	_____ stores
Scan Interface	_____ stores	_____ stores	_____ stores	_____ stores
Pharmacy	_____ stores	_____ stores	_____ stores	_____ stores
Administration	_____ stores	_____ stores	_____ stores	_____ stores
Time and Attendance	_____ stores	_____ stores	_____ stores	_____ stores
Scale Interconnect	_____ stores	_____ stores	_____ stores	_____ stores
Other (specify)_____	_____ stores	_____ stores	_____ stores	_____ stores

TELECOMMUNICATIONS

9. a. Does your voice and data communications staff report to a single manager? 1 Yes (Go to Question 9b)
2 No (Go to Question 9c)

b. Is that manager in your information systems department? (PLEASE CIRCLE) /1/ Yes /2/ No

c. What is your annual telecommunications cost for:
Voice $ _____
Data $ _____
Other $ _____
TOTAL $ _____

d. What type of telephone systems do you use in your stores? (Circle all that apply)
/1/ KEY SYSTEMS /2/ PBX /3/ CENTREX

e. Do you use T1 transmission facilities in your business? /1/ Yes (Go to Question 9f)
/2/ No (Go to Question 10)

f. Do they connect (Circle all that apply) /1/ Data Centers /2/ Regional or LATA Hubs /3/ Stores?

GENERAL INFORMATION

10. What are the three highest concerns or issues you, as an MIS executive for your organization, face in the next three years?

A. _____

B. _____

C. _____

11. What were your total annual company sales for your most recent fiscal year (only include divisions/departments for which you are providing IS service)?.....$_____

12. Is your company primarily (majority of your sales) a food:...../1/ Retailer /2/ Wholesaler

13. In this survey, have you reported information for your: A. Total supermarket company..... /1/
B. A division/subsidiary/partial company of a supermarket corp.... /2/

14. How many supermarkets (those food stores with at least $2 million annual sales) did you operate in 1987?.....stores

15. What were your total 1987 supermarket sales?.....$_____million

16. May we list your company as a participant in this report? (Please circle) /1/ Yes /2/ No

FOOD MARKETING INSTITUTE

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